

WHAT IS CLAIMED IS:

1. Apparatus for mooring a floating vessel over a seabed, comprising a partly submerged floating dock, a single point mooring system and a rigid connecting member connecting the dock to the single point mooring system, wherein the dock is
5 pivotally attached to the connecting member and the single point mooring system is attached to the seabed by a compliant anchoring system.
2. Apparatus as claimed in claim 1, wherein the rigid connecting member is pivotally attached to the dock for movement about two mutually perpendicular axes.
3. Apparatus as claimed in claim 1, further comprising at least one thrust
10 producing device mounted to the dock to facilitate movement of the dock relative to the single point mooring system or the stationary earth.
4. Apparatus as claimed in claim 1, wherein the floating dock further comprises variable buoyancy means to raise and lower the level of the dock in the water.
- 15 5. Apparatus as claimed in claim 1, wherein the single point mooring system comprises a floating buoy attached to the seabed by three equi-spaced anchor leg groups.
6. Apparatus as claimed in claim 1, further comprising a winch mechanism mounted on the single point mooring system, having a winch line attachable to a vessel
20 and operable to facilitate entry of the vessel into the dock.

7. Apparatus as claimed in claim 1, further comprising loading means on the dock for loading or unloading contents to or from a vessel moored in the dock.

8. Apparatus as claimed in claim 4, wherein the variable buoyancy means comprises at least one tank, means to admit water to the tank to reduce buoyancy and
5 means to supply gas to the tank to expel water therein in order to increase buoyancy.

9. Apparatus as claimed in claim 4, wherein the dock comprises a floor structure engageable against the hull of a vessel and a plurality of columns projecting upwardly from the floor structure, the columns arranged to allow a vessel to enter and exit the dock in the same direction.

10 10. Apparatus as claimed in claim 5, further comprising a swivel mechanism between the buoy and the anchor leg groups.

11. Apparatus as claimed in claim 5, wherein each anchor leg group comprises two or more generally parallel anchor legs.

12. Apparatus as claimed in claim 11, further comprising a riser for
15 connecting the single point mooring system to a seabed structure and fluid conduits extending from the riser to the dock for loading or unloading contents to or from a vessel moored in the dock.

13. A method for mooring a vessel over a seabed in an offshore environment, comprising the steps of:

20 providing a partly submerged floating dock;

providing a single point mooring system;

providing a rigid connecting member connecting the dock to the single point mooring system with the dock being pivotally attached to the connecting member;

attaching the single point mooring system to the seabed;

5 aligning the floating dock with the direction of approach of a floating vessel;

positioning the vessel within the dock;

increasing the buoyancy of the dock to raise the level of the dock in the water until it engages against the underside of the hull of the vessel to suppress differential motion between the vessel and the dock; and

10 loading or unloading material onto or from the vessel.